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EXAMINER

WILLIAMS, THOMAS J

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SIMON ANNE DE MOLINA and JEAN-MARIE TUTS

Appeal 2008-0980
Application 10/662,662
Technology Center 3600

Decided: June 13, 2008

Before TERRY J. OWENS, MURRIEL E. CRAWFORD, and
DAVID B. WALKER, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellants appeal from a rejection of claims 1, 3-7, and 9-23,
which are all of the pending claims.

THE INVENTION

The Appellants claim a shock absorber piston assembly, a shock
absorber including the piston assembly, and a method for using a shock
absorber to dampen an automobile ride deflection. Claim 1 is illustrative:

1. A shock absorber piston assembly, comprising:
 - a shock absorber piston having a first face and an opposed second face;
 - a plurality of fluid passages extending between the first face and the second face; and
 - a plurality of single direction valves attached to the piston, including:
 - at least two single direction rebound valves, each connectable to at least one of the fluid passages; and
 - at least two single direction compression valves, each connectable to at least one of the fluid passages:
- wherein each of the single direction rebound valves actuates at a different individually adjustable rebound valve opening pressure, each of the single direction compression valves actuates at a different individually adjustable compression valve opening pressure and each of the single direction valves comprises:
 - a pin having a threaded connection end;
 - a compressible device connectable to the pin, the compressible device creating a preload to urge the valve into a closed position;
- and,
- a fastener fastened to the threaded connection end, the fastener operably engaging the compressible device, the fastener comprising a threaded nut threadingly received on the threaded connection end, the threaded nut operable to vary the preload of the compressible device.

THE REFERENCES

| | | |
|---------------|--------------|---------------|
| Henry-Biabaud | US 3,432,008 | Mar. 11, 1969 |
| Harper | US 4,596,321 | Jun. 24, 1986 |
| Katz | US 4,624,346 | Nov. 25, 1986 |

Ergun

US 4,823,922

Apr. 25, 1989

THE REJECTIONS

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 1, 3-7, 10, 11 and 13-19 over Ergun in view of Henry-Biabaud; claim 9 over Ergun in view of Henry-Biabaud and Harper; claims 20, 21 and 23 over Ergun in view of Henry-Biabaud and Katz; and claim 22 over Ergun in view of Henry-Biabaud, Katz, and Harper.

OPINION

We affirm the Examiner's rejections.

Claims 1, 3-7, 9-11 and 13-19

Ergun discloses a shock absorber comprising a piston (28) having two halves (90, 92) that are identical except for being oriented in opposite directions, each half having three valves, the valves functioning in one half as compression valves and in the other half as recoil valves (col. 4, ll. 64-68; col. 5, ll. 26-45). All valves are identical and have springs and pins that "can be modified to effect the desire[d] damping characteristics" (col. 5, ll. 46-47). The split (two-half) piston provides for interchangeability of components and ease of assembly (col. 6, ll. 42-47).

Henry-Biabaud discloses a shock absorber comprising a partition (15) having oppositely facing compression and expansion valves that are of the same design and differ only in the adjustment of their helical or coil compression springs (5, 5a, 17, 17a) by means of nuts (4, 4a, 19, 19a) (col. 1, l. 68 – col. 2, l. 4; col. 2, ll. 9-14, 26-28; col. 3, ll. 3-7).

The Examiner argues (Ans. 5):

It would have been obvious to one of ordinary skill in the art to have provided the piston assembly of Ergun with the adjustable valve

unit taught by Henry-Biabaud, thus providing the artisan with the ability to easily vary the preload of the valve (by simply rotating the relevant nut) rather than having to modify parts as currently envisioned by Ergun (see column 5 lines 46-47). This would reduce the number of part[s] required for assembly and thus reduce the cost of manufacturing the shock absorber apparatus.

The Examiner's argument is consistent with the statement by the Supreme Court in *KSR Int'l. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1740 (2007), that "if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill."

The Appellants argue that Henry-Biabaud's valves require more components than Ergun's valves (Br. 11).

The Examiner responds that adjusting Ergun's valve-opening pressure requires disassembling the valve assembly and replacing the spring and pin, which necessitates having on hand a large number of pins and springs of various sizes, whereas using an adjustable valve as taught by Henry-Biabaud would eliminate the need to stock those extra springs and pins (Ans. 9).

The Appellants do not explain in their Reply Brief why that reasoning by the Examiner is incorrect. Hence, the record indicates that the Appellants acquiesced in that argument.

The Appellants argue that Ergun and Henry-Biabaud are not directed toward solving the same problem (Br. 11-12).

As stated by the Supreme Court in *KSR*, 127 S. Ct. at 1742, "the problem motivating the patentee may be only one of many addressed by the patent's subject matter. The question is not whether the combination was

obvious to the patentee but whether the combination was obvious to a person with ordinary skill in the art”. The combination would have been obvious to one of ordinary skill in the art for the Examiner’s reason set forth above.

The Appellants argue that “adding the adjustability as taught by Henry-Biabaud still does not provide the disclosure or suggestion to have each of the rebound valves and each of the compression valves opening as [sic, at] different pressures or sequentially” (Reply Br. 4).

Neither Ergun nor Henry-Biabaud discloses adjusting valves such that they open at different pressures. However, because the valves obtained by combining Ergun and Henry-Biabaud to reduce the number of parts required to be kept on hand as argued by the Examiner (Ans. 9) would be individually adjustable, they would be capable of adjustment to open at different pressures. Hence, Ergun and Henry-Biabaud would have rendered the Appellants’ claimed shock absorber and shock absorber piston assembly having individually adjustable valves *prima facie* obvious to one of ordinary skill in the art.

We therefore are not persuaded of reversible error in the rejections of claims 1, 3-7, 9-11 and 13-19.

Claims 20-23

Claims 20-23 are method claims that require steps of adjusting the compression valves and the rebound valves to open sequentially.

The Examiner argues (Ans. 7):

Katz teaches a method for damping a vehicle ride using a shock absorber with rebound and compression valves that open in a sequential order, see column 4 lines 9-16, wherein it is noted that some valve[s] are weakly loaded while others are more strongly loaded. It would have been obvious to one of ordinary skill in the art to have utilized the teachings of Katz when having set the opening

pressures of the valves in Ergun, thus providing a wide damping range for the shock absorber and improving the comfort level for the passengers in the vehicle.

The Appellants do not address the Examiner's argument regarding Katz (Br. 16; Reply Br. 1-4). Hence, the Appellants have not convinced us of reversible error in the rejections of method claims 20-23.

DECISION

The rejections under 35 U.S.C. § 103 of claims 1, 3-7, 10, 11 and 13-19 over Ergun in view of Henry-Biabaud, claim 9 over Ergun in view of Henry-Biabaud and Harper, claims 20, 21, and 23 over Ergun in view of Henry-Biabaud and Katz, and claim 22 over Ergun in view of Henry-Biabaud, Katz and Harper are affirmed.

AFFIRMED

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PL initials:
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